

We Claim:

1. A method for treating glaucoma, said method comprising administering to a patient in need thereof a therapeutically effective amount of a composition comprising
5 at least one cathepsin K antagonist.

2. The method of claim 1, wherein the cathepsin K antagonist is selected from the group consisting of monensin, brefeldin A, tunicamycin and 1,3-bis(acylamino)-2-propanone derivatives, cycloaltisin 6, cycloaltisin 7, AC-3-1, AC-3-3, AC-5-1,
10 haploscleridamine, 5-(2-morpholin-4-yl-thoxy)-benzofuran-2-carboxylic acid ((S)-3-methyl-1-[3-oxo-1-[2-(3-pyridin-2-yl-phenyl)-ethenoyl]-azepan-4-ylcarbanoyl]-butyl)-amide (SB-331750), SB-357114, peptidomimetic aminomethyl ketones, α,α' -diacylamino ketones, alkoxymethyl ketones, cyanamides, pyridoxal propionate derivatives (including Clik-164 and Clik-166), SB-290190, α -alkoxyketone derivatives,
15 cyanamide derivatives, and N_α -acyl- α -amino acid-(arylaminoethyl)amides.

3. The method of claim 1, wherein the cathepsin K antagonist is an arylaminoethyl amide.

20 4. The method of claim 1, wherein the cathepsin K antagonist is selected from the group consisting of:

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

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(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboxamidothiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

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(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-cyanothiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-[2-(N'-benzylcarboxamido)thiazol-4-yl]-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-[2-[N'-3-methylpropyl]carboxamido]thiazol-4-yl)]-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-[2-[N'-2-phenylethyl]carboxamido]thiazol-4-yl)]-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxythiadiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carbo-2,2,2-trifluoroethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxyoxadiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl-L-leucinyl)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboxamidooxadiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-3-phenylpropanamide;

5 (2S,1'S)-2-(benzyloxycarbonyl-L-leucinyloxy)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(5-mercapto-1,2,4-oxadiazol-3-yl)-3'-methylbutyl]-4-methylpentanamide;

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(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-mercaptothiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

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(2S)-2-(benzyloxycarbonyl)amino-N-(4-carboethoxythiazol-2-yl)methyl-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-benzyloxycarbonylthiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

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(2S,1'S)-2-(benzyloxycarbonyl)amino-4-methyl-N-[3'-methyl-1'-(2-phenoxy carbonylthiazol-4-yl)butyl]pentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-4-methyl-N-[3'-methyl-1'-(2-(2-methylpropyloxy carbonyl)thiazol-4-yl)butyl]pentanamide;

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(2R,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(carboethoxythiazol-2-yl)ethyl]-4-methylpentanamide;

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(2R,1'R)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxythiazol-2-yl)ethyl]-4-methylpentanamide;

(2S,1'S)-N-[1'-(2-aminothiazol-4-yl)-3'-methylbutyl]-2-(benzyloxycarbonyl)amino-4-methylpentanamide;

5 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

10 2S,1'S)-2-(benzyloxycarbonyl-L-leuciny)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(1S)-N-[4-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-2-ylcarbonyl]-N'-(N-benzyloxycarbonyl-L-leuciny)hydrazide;

15 N-benzyloxycarbonyl-L-leuciny-N'-benzyloxycarbonyl-L-leuciny-L-leucinyhydrazide;

20 (1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-(N-benzyloxycarbonyl-L-leuciny)hydrazide;

2,2'-(N,N'-bis-benzyloxycarbonyl-L-leuciny)carbohydrazide;

2,2'-(N,N'-bis-cyclohexylacetyl)carbohydrazide;

25 2,2'-(N,N'-bis-4-methylpentanoyl)carbohydrazide;

2,2'-(N,N'-bis-cyclopentylacetyl)carbohydrazide;

30 2,2'-(N,N'-bis-benzyloxycarbonylglyciny)carbohydrazide;

2,2'-(N,N'-bis-acetyl-L-leuciny)carbohydrazide;

2,2'-(N,N'-bis-benzyloxycarbonyl-L-alanyl)carbohydrazide;

2-(N-benzyloxycarbonyl-L-leucinyl)-2'-[N'-(4-methylpentanoyl)]carbohydrazide;

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2,2'-(N,N'-bis-benzyloxycarbonyl-L-leucinyl)carbohydrazide;

bis-(Cbz-leucinyl)-1,3-diamino-propan-2-one;

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bis-1,3-(4-phenoxy-benzoyl)-diamino-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(acetyl-leucinyl)-amino-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(Cbz-glutamyl-t-butyl ester)-amino-propan-2-one;

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1-(Cbz-leucinyl)-amino-3-(Cbz-glutamyl)-amino-propan-2-one;

bis-1,3-(Cbz-leucinyl)-diamino-(S)-butanone-2-one;

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1-(Cbz-leucinyl)-amino-3-(Cbz-phenylalanyl)-amino-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(Cbz-norleucinyl)-amino-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(Cbz-norvalinyl)-amino-propan-2-one;

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bis-1,3-(Cbz-leucinyl)-diamino-5-methyl-(S)-hexan-2-one;

1-(acetyl-leucinyl)-amino-3-(4-phenoxy-benzoyl)-amino-propan-2-one;

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1-(Cbz-homo-leucinyl)-amino-(Cbz-leucinyl)-3-amino-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(acetyl-leucinyl)-amino-propan-2-one;

bis-1,3-(4-(3-chloro-2-cyano-phenoxy)-phenyl sulfonamido)-propan-2-one;

bis-1,3-(4-phenoxy-phenyl sulfonamido)-propan-2-one;

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1-(Cbz-leuciny)-amino-3-(4-(3-chloro-2-cyano-phenoxy)-phenyl sulfonamido)-propan-2-one;

1-(Cbz-leuciny)-amino-3-(tosyl-amino)-propan-2-one;

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1-(Cbz-leuciny)-amino-3-((4-phenoxy-phenyl)-sulfonamido)-propan-2-one;

1-(Cbz-leuciny)-amino-3-(2-dibenzofuransulfonamido)-propan-2-one;

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1-(Cbz-homo-leuciny)-amino-3-(2-dibenzofuransulfonamido)-propan-2-one;

1-(Cbz-leuciny)-amino-3-(2-dibenzofuransulfonamido)-(S)-butan-2-one;

1-(Cbz-leuciny)-amino-3-((4-phenoxy-phenyl)-sulfonamido)-propan-2-one;

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1-(Cbz-leuciny)-amino-3-(2-dibenzofuransulfonamido)-propan-2-one;

1-(Cbz-leuciny)-amino-3-(2-dibenzofuransulfonamido)-(S)-butan-2-one;

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(S)-Phenylmethyl [1-[[[3-[benzyloxycarbonyl-leuciny)-amino]-2-oxopropyl]-1-(benzyl)amino]carbonyl]-3-methylbutyl]carbamate;

(S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-3-(benzyl)amino]carbonyl]-3-methylbutyl]carbamate;

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(S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-3-(4-pyridinylmethyl)amino]carbonyl]-3-methylbutyl]carbamate;

1-[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-3-(4-pyridinylmethyl)]
benzamide;

5 (S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-1-(4-
pyridinylmethyl)amino]carbonyl]-3-methylbutyl]carbamate;

(S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-1-(4-
pyridinylmethyl)amino]carbonyl]-3-methylbutyl]carbamate;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-
phenoxyphenylsulfonyl)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-alanyl)]-2'-[N-(N-benzyloxycarbonyl-L-leuciny)]
carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-
phenylbenzoyl)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-
methoxybenzoyl)]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-
phenoxybenzoyl)]carbohydrazide;

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2-(N-acetyl)-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

2-[N-(N-acetyl-L-leuciny)]-2'-[N'-(N-benzyloxycarbonyl-L-
alanyl)]carbohydrazide;

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2-[N-(N-acetyl-L-alanyl)]-2'-[N'-(N-benzyloxycarbonyl-L-
leuciny)]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[4-(N,N-dimethylaminomethyl) benzoyl]]carbohydrazide;

5 2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[4-hydroxy-[3-(4-morpholinomethyl)]benzoyl]]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[4-[(N,N-dimethylaminomethyl) benzyloxy]carbonyl-L-leuciny]]carbohydrazide;

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2-(N-benzoyl)-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[3-(4-morpholinomethyl)benzoyl]] carbohydrazide;

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2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[4-[3-N,N-dimethylamino)-1-propyloxy] benzoyl]]carbohydrazide;

2-[N-(2-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[3-(4-pyridylmethoxy)benzoyl]] carbohydrazide;

2-[N-(4-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(3-benzyloxy-5-methoxy)benzoyl] carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leucinyl)]-2'-[N'-(3-benzyloxy-4,5-dimethoxy)
benzoyl]carbohydrazide;

5 2-[N-(N-benzyloxycarbonyl-L-leucinyl)]-2'-[N'-(3-benzyloxy-5-ethoxy)
benzoyl]carbohydrazide;

2-[N-(N-benzyloxycarbonylglycinyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leucinyl)]
carbohydrazide;

10 2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-
prolinyl)]carbohydrazide;

15 2-[N-(N-benzyloxycarbonyl-L-leucinyl)]-2'-[N'-(4-
phenylphenylacetyl)]carbohydrazide;

(2'S)-2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-2-aminobutyryl)]
carbohydrazide;

20 2,2'-[N,N'-[bis-4-phenylphenylacetyl]]carbohydrazide;

(2'RS)-2-[N-(N-benzyloxycarbonyl-L-leucinyl)]-2'-[2-(4-
phenylphenoxy)propionyl] carbohydrazide;

25 2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(4-methylpentanoyl)]carbohydrazide;

(2RS,2'RS)-2,2'-[N,N'-[bis-[2-(4-phenylphenyl)-4-
methylpentanoyl]]]carbohydrazide;

30 (2'RS)-2-[N-(N-benzyloxycarbonyl-L-leucinyl)]-2'-[N'-[2-(4-phenylphenyl)-4-
methylpentanoyl]]carbohydrazide;

(2'RS)-2-[N-(3-benzyloxybenzoyl)]-2'-[N-[2-(4-phenylphenyl)-4-methylpentanoyl]] carbohydrazide;

5 2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-N-methyl-L-leuciny)] carbohydrazide;

2-[N-(3-benzyloxybenzoyl)]-2'-[N'-[N-(2-pyridinylmethoxycarbonyl)-L-leuciny]] carbohydrazide;

10 2-[N-[3-(4-pyridylmethoxy)benzoyl]]-2'-[N'-[N-(2-pyridinylmethoxycarbonyl)-L-leuciny]]carbohydrazide;

(2RS)-2-[N-[2-(4-phenylphenyl)-4-methylpentanoyl]]-2'-[N'-[N-(2-pyridinylmethoxy carbonyl)-L-leuciny]]carbohydrazide;

15 2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[2-4-phenylphenyl)-4-methylpentanoyl]] carbohydrazide;

20 2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[2-(4-phenylphenyl)-4-methylpentanoyl]] carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[N-(4-phenylphenyl)-N-(2-methylpropyl) carbamoyl]]carbohydrazide;

25 2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-methyl-L-leuciny)]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(N-methyl-L-leuciny)]carbohydrazide;

30 (1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-(4-phenoxyphenylsulfonyl)hydrazide;

(1S)-N-[4-[1-(N-benzyloxycarbonyl-L-leucinylamino)-3-methylbutyl]thiazol-2-ylcarbonyl]-N'-(N-benzyloxycarbonyl-L-leucinyl)hydrazide;

(1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-(4-phenylphenylacetyl)hydrazide;

(1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-[3-(4-pyridinylmethoxy)benzoyl]hydrazide;

N-[2-(2-chlorophenoxymethyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leucinyl]hydrazide;

N-[N-(4-pyridinylmethoxycarbonyl)-L-leucinyl]-N'-[2-[4-(1,2,3-thiadiazol-4-yl)phenyl]thiazol-4-ylcarbonyl]hydrazide;

N-[2-[3-(4-chlorophenylsulfonylmethyl)thien-2-yl]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leucinyl]hydrazide;

(1S,2'RS)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-[2'-(4-phenylphenylacetyl)-4-methylpentanoyl]hydrazide;

N-[2-(3-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(2-pyridinylmethoxycarbonyl)-L-leucinyl]hydrazide;

(1RS)-N-[2-[1-(4-phenylphenyl)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leucinyl]hydrazide;

N-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leucinyl]hydrazide;

N-[2-[N-methyl-N-(4-phenylphenyl)amino]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinyl methoxycarbonyl)-L-leucinyl]hydrazide;

N-(N-benzyloxycarbonyl-L-leuciny)-N'-[2-(4-phenylbenzyl)thiazol-4-ylcarbonyl]hydrazide;

5 N-[2-(4-phenylphenylbenzyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

N-(N-benzyloxycarbonyl-L-leuciny)-N'-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]hydrazide;

10 N-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinyl methoxycarbonyl)-L-leuciny]hydrazide;

N-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(3-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

15 N-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(2-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

20 N-(N-benzyloxycarbonyl-N-methyl-L-leuciny)-N'-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]hydrazide;

N-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]-N'-[N-(2-pyridinyl methoxycarbonyl)-L-leuciny]hydrazide;

25 N-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]-N'-[N-(3-pyridinyl methoxycarbonyl)-L-leuciny]hydrazide;

30 N-[2-(2-methoxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[4-(N,N-dimethylaminomethyl) benzyloxy]carbonyl-L-leuciny]carbonylhydrazide;

(3S,4S)-3-(2S-2-benzyloxycarbonylamino-2-cyclohexyl-methyl-acetamido)-4-acetoxy-azetidin-2-one;

(3S,4S)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-acetoxy-azetidin-2-one;

(3S,4S)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-{4-(2S-2-amino-2-carboxy-ethyl)-phenoxy}-azetidin-2-one;

(3S,4R)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-{4-(2S-2-amino-2-carboxy-ethyl)-phenoxy}-azetidin-2-one;

(3S,4SR)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-phenylthio-azetidin-2-one;

(3S,4SR)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-phenylsulfonyl-azetidin-2-one;

(3S,4S)-3-{2S-2-(benzylaminocarbonyl)amino-2-cyclo-hexylmethyl-acetamido}-4-acetoxy-azetidin-2-one;

(3S,4S)-3-{2S-2-(phenylethenylsulfonyl)amino-2-cyclohexylmethyl-acetamido}-4-acetoxy-azetidin-2-one;

(3S,4S)-3-(2S-2-benzyloxycarbonylamino-2-cyclohexylmethyl-acetamido)4-(3-methyl-phenoxy)-azetidin-2-one;

(3S,4R)-3-(2S-2-benzyloxycarbonyl amino-2-cyclohexylmethyl-acetamido)4-(3-methyl-phenoxy)-azetidin-2-one;

(3S,4S)-3-{2S-2-[3-(pyridin-4-yl) propenoyl]amino-2-cyclohexylmethyl-acetamido}-4-phenoxy-azetidin-2-one; and

5 (3S,4S)-3-{2S-2-[3-(pyridin-3-yl) propenoyl]amino-2-cyclohexylmethyl-acetamido}4-phenoxy-azetidin-2-one.

5. A composition for the treatment of glaucoma, said composition comprising a therapeutically effective amount of at least one cathepsin K antagonist
10 and a pharmaceutically acceptable excipient.

6. The composition of claim 5, wherein the cathepsin K antagonist is selected from the group consisting of arylaminoethyl amides, monensin, brefeldin A, tunicamycin and 1,3-bis(acylamino)-2-propanone derivatives, cycloaltisin 6,
15 cycloaltisin 7, AC-3-1, AC-3-3, AC-5-1, haploscleridamine, 5-(2-morpholin-4-yl-thoxy)-benzofuran-2-carboxylic acid ((S)-3-methyl-1-[3-oxo-1-[2-(3-pyridin-2-yl-phenyl)-ethenoyl]-azepan-4-ylcarbanoyl)-butyl)-amide (SB-331750), SB-357114, peptidomimetic aminomethyl ketones, α,α' -diacylamino ketones, alkoxymethyl ketones, cyanamides, pyridoxal propionate derivatives (including Clik-164 and Clik-166), SB-
20 290190, α -alkoxyketone derivatives, cyanamide derivatives, and N_α -acyl- α -amino acid-(arylaminomethyl)amides.

7. The composition of claim 5, wherein the cathepsin K antagonist is an arylaminomethyl amide.
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8. The composition of claim 5, wherein the cathepsin K antagonist is selected from the group consisting of:

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;
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(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboxamidothiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

5 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-cyanothiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

10 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-[2-(N'-benzylcarboxamido)thiazol-4-yl]-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-[2-[N'-3-methylpropyl)carboxamido]thiazol-4-yl]-3'-methylbutyl]-4-methylpentanamide;

15 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-[2-[N'-2-phenylethyl)carboxamido]thiazol-4-yl]-3'-methylbutyl]-4-methylpentanamide;

20 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

25 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxythiadiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carbo-2,2,2-trifluoroethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

30 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxyoxadiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl-L-leucynyl)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

5 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboxamidooxadiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-3-phenylpropanamide;

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(2S,1'S)-2-(benzyloxycarbonyl-L-leucynyl)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

15 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(5-mercapto-1,2,4-oxadiazol-3-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-mercaptothiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

20 (2S)-2-(benzyloxycarbonyl)amino-N-(4-carboethoxythiazol-2-yl)methyl-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-benzyloxycarbonylthiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

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(2S,1'S)-2-(benzyloxycarbonyl)amino-4-methyl-N-[3'-methyl-1'-(2-phenoxy carbonylthiazol-4-yl)butyl]pentanamide;

30 (2S,1'S)-2-(benzyloxycarbonyl)amino-4-methyl-N-[3'-methyl-1'-[2-(2-methylpropyloxy carbonyl)thiazol-4-yl]butyl]pentanamide;

(2R,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(carboethoxythiazol-2-yl)ethyl]-4-methylpentanamide;

5 (2R,1'R)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carbethoxythiazol-2-yl)ethyl]-4-methylpentanamide;

(2S,1'S)-N-[1'-(2-aminothiazol-4-yl)-3'-methylbutyl]-2-(benzyloxycarbonyl)amino-4-methylpentanamide;

10 (2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(2-carboethoxythiazol-4-yl)-3'-methylbutyl]-4-methylpentanamide;

(2S,1'S)-2-(benzyloxycarbonyl)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

15 2S,1'S)-2-(benzyloxycarbonyl-L-leucinyloxy)amino-N-[1'-(4-carboethoxythiazol-2-yl)-3'-methylbutyl]-4-methylpentanamide;

20 (1S)-N-[4-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-2-ylcarbonyl]-N'-(N-benzyloxycarbonyl-L-leucinyloxy)hydrazide;

N-benzyloxycarbonyl-L-leucinyloxy-N'-benzyloxycarbonyl-L-leucinyloxy-L-leucinyloxyhydrazide;

25 (1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-(N-benzyloxycarbonyl-L-leucinyloxy)hydrazide;

2,2'-(N,N'-bis-benzyloxycarbonyl-L-leucinyloxy)carbohydrazide;

30 2,2'-(N,N'-bis-cyclohexylacetyl)carbohydrazide;

2,2'-(N,N'-bis-4-methylpentanoyl)carbohydrazide;

2,2'-(N,N'-bis-cyclopentylacetyl)carbohydrazide;

2,2'-(N,N'-bis-benzyloxycarbonylglyciny)carbohydrazide;

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2,2'-(N,N'-bis-acetyl-L-leuciny)carbohydrazide;

2,2'-(N,N'-bis-benzyloxycarbonyl-L-alanyl)carbohydrazide;

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2-(N-benzyloxycarbonyl-L-leuciny)-2'-[N'-(4-methylpentanoyl)]carbohydrazide;

2,2'-(N,N'-bis-benzyloxycarbonyl-L-leuciny)carbohydrazide;

bis-(Cbz-leuciny)-1,3-diamino-propan-2-one;

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bis-1,3-(4-phenoxy-benzoyl)-diamino-propan-2-one;

1-(Cbz-leuciny)-amino-3-(acetyl-leuciny)-amino-propan-2-one;

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1-(Cbz-leuciny)-amino-3-(Cbz-glutamyl-t-butyl ester)-amino-propan-2-one;

1-(Cbz-leuciny)-amino-3-(Cbz-glutamyl)-amino-propan-2-one;

bis-1,3-(Cbz-leuciny)-diamino-(S)-butanone-2-one;

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1-(Cbz-leuciny)-amino-3-(Cbz-phenylalanyl)-amino-propan-2-one;

1-(Cbz-leuciny)-amino-3-(Cbz-norleuciny)-amino-propan-2-one;

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1-(Cbz-leuciny)-amino-3-(Cbz-norvaliny)-amino-propan-2-one;

bis-1,3-(Cbz-leuciny)-diamino-5-methyl-(S)-hexan-2-one;

1-(acetyl-leucinyl)-amino-3-(4-phenoxy-benzoyl)-amino-propan-2-one;

1-(Cbz-homo-leucinyl)-amino-(Cbz-leucinyl)-3-amino-propan-2-one;

5

1-(Cbz-leucinyl)-amino-3-(acetyl-leucinyl)-amino-propan-2-one;

bis-1,3-(4-(3-chloro-2-cyano-phenoxy)-phenyl sulfonamido)-propan-2-one;

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bis-1,3-(4-phenoxy-phenyl sulfonamido)-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(4-(3-chloro-2-cyano-phenoxy)-phenyl sulfonamido)-propan-2-one;

15

1-(Cbz-leucinyl)-amino-3-(tosyl-amino)-propan-2-one;

1-(Cbz-leucinyl)-amino-3-((4-phenoxy-phenyl)-sulfonamido)-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(2-dibenzofuransulfonamido)-propan-2-one;

20

1-(Cbz-homo-leucinyl)-amino-3-(2-dibenzofuransulfonamido)-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(2-dibenzofuransulfonamido)-(S)-butan-2-one;

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1-(Cbz-leucinyl)-amino-3-((4-phenoxy-phenyl)-sulfonamido)-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(2-dibenzofuransulfonamido)-propan-2-one;

1-(Cbz-leucinyl)-amino-3-(2-dibenzofuransulfonamido)-(S)-butan-2-one;

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(S)-Phenylmethyl [1-[[[3-[benzyloxycarbonyl-leucinyl-amino]-2-oxopropyl]-1-(benzyl)amino]carbonyl]-3-methylbutyl]carbamate;

(S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-3-(benzyl)amino]carbonyl]-3-methylbutyl]carbamate;

5 (S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-3-(4-pyridinylmethyl)amino]carbonyl]-3-methylbutyl]carbamate;

1-[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-3-(4-pyridinylmethyl)]benzamide;

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(S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-1-(4-pyridinylmethyl)amino]carbonyl]-3-methylbutyl]carbamate;

15

(S)-Phenylmethyl [1-[[[3-[(2-dibenzofuranylsulfonyl)amino]-2-oxopropyl]-1-(4-pyridinylmethyl)amino]carbonyl]-3-methylbutyl]carbamate;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-phenoxyphenylsulfonyl)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-alanyl)]-2'-[N-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-phenylbenzoyl)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-methoxybenzoyl)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-phenoxybenzoyl)]carbohydrazide;

2-(N-acetyl)-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

2-[N-(N-acetyl-L-leucynyl)]-2'-[N'-(N-benzyloxycarbonyl-L-alanyl)]carbohydrazide;

5 2-[N-(N-acetyl-L-alanyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leucynyl)]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leucynyl)]-2'-[N'-[4-(N,N-dimethylaminomethyl)benzoyl]]carbohydrazide;

10 2-[N-(N-benzyloxycarbonyl-L-leucynyl)]-2'-[N'-[4-hydroxy-[3-(4-morpholinomethyl)]benzoyl]]carbohydrazide;

15 2-[N-(N-benzyloxycarbonyl-L-leucynyl)]-2'-[N'-[4-[(N,N-dimethylaminomethyl)benzyloxy]carbonyl-L-leucynyl]]carbohydrazide;

2-(N-benzoyl)-2'-[N'-(N-benzyloxycarbonyl-L-leucynyl)]carbohydrazide;

20 2-[N-(N-benzyloxycarbonyl-L-leucynyl)]-2'-[N'-[3-(4-morpholinomethyl)benzoyl]] carbohydrazide;

2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leucynyl)]carbohydrazide;

25 2-[N-(N-benzyloxycarbonyl-L-leucynyl)]-2'-[N'-[4-[3-N,N-dimethylamino)-1-propyloxy] benzoyl]]carbohydrazide;

2-[N-(2-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leucynyl)]carbohydrazide;

30 2-[N-(N-benzyloxycarbonyl-L-leucynyl)]-2'-[N'-[3-(4-pyridylmethoxy)benzoyl]] carbohydrazide;

2-[N-(4-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

5 2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(3-benzyloxy-5-methoxy)benzoyl] carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(3-benzyloxy-4,5-dimethoxybenzoyl)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(3-benzyloxy-5-ethoxybenzoyl)]carbohydrazide;

15

2-[N-(N-benzyloxycarbonyl)glyciny)]-2'-[N'-(N-benzyloxycarbonyl-L-leuciny)]carbohydrazide;

2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-L-proliny)]carbohydrazide;

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2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(4-phenylphenylacetyl)]carbohydrazide;

(2'S)-2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-2-aminobutyryl)]carbohydrazide;

25

2,2'-[N,N'-[bis-4-phenylphenylacetyl]]carbohydrazide;

(2'RS)-2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[2-(4-phenylphenoxy)propionyl] carbohydrazide;

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2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(4-methylpentanoyl)]carbohydrazide;

(2RS,2'RS)-2,2'-[N,N'-[bis-[2-(4-phenylphenyl)-4-methylpentanoyl]]]carbohydrazide;

(2'RS)-2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[2-(4-phenylphenyl)-4-methylpentanoyl]]carbohydrazide;

(2'RS)-2-[N-(3-benzyloxybenzoyl)]-2'-[N-[2-(4-phenylphenyl)-4-methylpentanoyl]] carbohydrazide;

2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-benzyloxycarbonyl-N-methyl-L-leuciny)]carbohydrazide;

2-[N-(3-benzyloxybenzoyl)]-2'-[N'-[N-(2-pyridinylmethoxycarbonyl)-L-leuciny]]carbohydrazide;

2-[N-[3-(4-pyridylmethoxy)benzoyl]]-2'-[N'-[N-(2-pyridinylmethoxycarbonyl)-L-leuciny]]carbohydrazide;

(2RS)-2-[N-[2-(4-phenylphenyl)-4-methylpentanoyl]]-2'-[N'-[N-(2-pyridinylmethoxy carbonyl)-L-leuciny]]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[2-(4-phenylphenyl)-4-methylpentanoyl]] carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[2-(4-phenylphenyl)-4-methylpentanoyl]] carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[N-(4-phenylphenyl)-N-(2-methylpropyl) carbamoyl]]carbohydrazide;

2-[N-(3-benzyloxybenzoyl)]-2'-[N'-(N-methyl-L-leuciny)]carbohydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-(N-methyl-L-leuciny)]carbohydrazide;

(1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-(4-phenoxyphenylsulfonyl)hydrazide;

(1S)-N-[4-[1-(N-benzyloxycarbonyl-L-leuciny)amino]-3-methylbutyl]thiazol-2-ylcarbonyl]-N'-(N-benzyloxycarbonyl-L-leuciny)hydrazide;

(1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-(4-phenylphenylacetyl)hydrazide;

(1S)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-[3-(4-pyridinylmethoxy)benzoyl]hydrazide;

N-[2-(2-chlorophenoxymethyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

N-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]-N'-[2-[4-(1,2,3-thiadiazol-4-yl)phenyl]thiazol-4-ylcarbonyl]hydrazide;

N-[2-[3-(4-chlorophenylsulfonylmethyl)thien-2-yl]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

(1S,2'RS)-N-[2-[(1-benzyloxycarbonylamino)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-[2'-(4-phenylphenylacetyl)-4-methylpentanoyl-]hydrazide;

N-[2-(3-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(2-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

(1RS)-N-[2-[1-(4-phenylphenyl)-3-methylbutyl]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

N-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

5 N-[2-[N-methyl-N-(4-phenylphenyl)amino]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinyl methoxycarbonyl)-L-leuciny]hydrazide;

N-(N-benzyloxycarbonyl-L-leuciny)-N'-[2-(4-phenylbenzyl)thiazol-4-ylcarbonyl]hydrazide;

10

N-[2-(4-phenylphenylbenzyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

15 N-(N-benzyloxycarbonyl-L-leuciny)-N'-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]hydrazide;

N-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinyl methoxycarbonyl)-L-leuciny]hydrazide;

20 N-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(3-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

N-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(2-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

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N-(N-benzyloxycarbonyl-N-methyl-L-leuciny)-N'-[2-(2-benzyloxyphenyl)thiazol-4-ylcarbonyl]hydrazide;

30 N-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]-N'-[N-(2-pyridinyl methoxycarbonyl)-L-leuciny]hydrazide;

N-[2-[N-(2-methylpropyl)-N-phenylamino]thiazol-4-ylcarbonyl]-N'-[N-(3-pyridinyl methoxycarbonyl)-L-leuciny]hydrazide;

5 N-[2-(2-methoxyphenyl)thiazol-4-ylcarbonyl]-N'-[N-(4-pyridinylmethoxycarbonyl)-L-leuciny]hydrazide;

2-[N-(N-benzyloxycarbonyl-L-leuciny)]-2'-[N'-[4-(N,N-dimethylaminomethyl)benzyloxy]carbonyl-L-leuciny]carbonhydrazide;

10 (3S,4S)-3-(2S-2-benzyloxycarbonylamino-2-cyclohexyl-methyl-acetamido)-4-acetoxy-azetidin-2-one;

(3S,4S)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-acetoxy-azetidin-2-one;

15 (3S,4S)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-{4-(2S-2-amino-2-carboxy-ethyl)-phenoxy}-azetidin-2-one;

20 (3S,4R)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-{4-(2S-2-amino-2-carboxy-ethyl)-phenoxy}-azetidin-2-one;

(3S,4SR)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-phenylthio-azetidin-2-one;

25 (3S,4SR)-3-{2S-2-(3-phenylpropionoyl)amino-2-cyclo-hexylmethyl-acetamido}-4-phenylsulfonyl-azetidin-2-one;

(3S,4S)-3-{2S-2-(benzylaminocarbonyl)amino-2-cyclo-hexylmethyl-acetamido}-4-acetoxy-azetidin-2-one;

30 (3S,4S)-3-{2S-2-(phenylethenylsulfonyl)amino-2-cyclohexylmethyl-acetamido}-4-acetoxy-azetidin-2-one;

(3S,4S)-3-(2S-2-benzyloxycarbonylamino-2-cyclohexylmethyl-acetamido)4-(3-methyl-phenoxy)-azetidin-2-one;

5 (3S,4R)-3-(2S-2-benzyloxycarbonyl amino-2-cyclohexylmethyl-acetamido)4-(3-methyl-phenoxy)-azetidin-2-one;

(3S,4S)-3-{2S-2-[3-(pyridin-4-yl) propenoyl]amino-2-cyclohexylmethyl-acetamido}-4-phenoxy-azetidin-2-one; and

10

(3S,4S)-3-{2S-2-[3-(pyridin-3-yl) propenoyl]amino-2-cyclohexylmethyl-acetamido}4-phenoxy-azetidin-2-one.